Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-6 (Cancelled).

7. (Currently amended) A compound which has the property of modulation of signal transduction of a 7TM receptor consisting of: at least one moiety for transport across cellular membranes, in association with a peptide sequence of ~~4-55~~ 5-20 amino acid residues selected from the group consisting of:

(a) a peptide sequence which is a continuous stretch of at least 5 amino acids present in the 7TM receptor in positions corresponding to the positions 143-151 of rhodopsin when the 2nd intracellular region of the 7TM receptor is aligned with the 2nd intracellular region of rhodopsin;

(b) a variant of the peptide sequence according to (a) wherein up to 40% of the amino acids of the native sequence have been replaced with a naturally or non-naturally occurring amino acid or with a peptidomimetic moiety; and/or up to 40% of the amino acids have their side chains chemically modified; and/or up to 20% of the amino acids have been deleted provided that at least 50% of the amino acids in the parent sequence of (a) are maintained unaltered in the variant;

(c) a peptide sequence according to (a) or (b) wherein at least one of the amino acids is replaced with a corresponding D-amino acid;

(d) a peptide sequence according to any one of (a) - (c) wherein at least one of the peptidic backbones has been altered to a non-naturally occurring peptidic backbone;

(e) a peptide sequence being the sequence of any one of (a) - (d) in reverse order; and

(f) a combination of two or more of the peptide sequences of (a) to (e).

8. (Original) A compound according to Claim 7, wherein the moiety is a hydrophobic moiety.

Claims 9-19 (Cancelled).

20. (Withdrawn) A method for the stimulation of angiogenesis comprising: contacting blood vessels with an effective amount of a compound comprising a sequence selected from the group consisting of:

(g) a sequence according to claim 7(a) which is a continuous stretch of at least 5 amino acids present in native EDG3 7TM receptor in residue positions 143 to 151;

(h) a variant of the sequence according to claim 7 (a) wherein up to 40% of the amino acids of the native sequence have been replaced with a naturally or non-naturally occurring amino acid or with a peptidomimetic moiety; and/or up to 40% of the amino acids have their side chains chemically modified; and/or up to 20% of the amino acids have been deleted provided that at least 50% of the amino acids in the parent sequence of (a) are maintained unaltered and the variant, and provided that the variant has angiogenesis stimulating properties;

(i) a sequence according to claim 7 (a) or (b) wherein at least one of the amino acids is replaced with a corresponding D-amino acid;

(j) a sequence according to any one of claim 7 (a) - (c) wherein at least one of the peptidic backbones has been altered to a non-naturally occurring peptidic backbone;

(k) a sequence being the sequence of any one of claim 7 (a) - (d) in reverse order and;

(l) combination of two or more of the sequences of claim 7 (a) to (f).

Claim 21 (Cancelled).

22. (Withdrawn) A method according to claim 20, wherein the sequence of (a) is in residue positions 143-148 of the EDG3 7TM receptor.

23. (Withdrawn-currently amended) A method according to claim ~~21~~20, wherein the compound is R002L103 (SEQ ID NO:4).

24. (Withdrawn) A method according to claim 22, wherein the compound is R002L106 (SEQ ID NO:5).

25. (Withdrawn) A method for the treatment of a disease, wherein a therapeutically beneficial effect may be evident by stimulation of angiogenesis, comprising administering to an individual in need of such treatment an effective amount of a compound as defined in claim 20.

26. (Withdrawn) A method according to claim 25, wherein the disease is selected from the group consisting of coronary artery diseases, peripheral artery diseases, endothelial

vascular diseases, arteriosclerosis, various processes of wound and tissue healing such as healing of bone tendon endothelial lining (such as in ulcers in the stomach or skin), for improving the success rate of cell transplantation techniques, in reconstructive surgery to help reestablish proper blood circulation to the reconstructed tissue.

27. (Withdrawn) A method for the modulation of signal transduction associated with a 7TM receptor in a subject, comprising administering to the subject a therapeutically effective amount of a compound according to Claim 7.

28. (Withdrawn) A method for the treatment of a disease, wherein a therapeutically beneficial effect may be evident by the modulation of a signal transduction associated with a 7TM receptor, comprising:

administering to a subject in need of such treatment a therapeutically effective amount of a compound according to Claim 7, wherein the 7TM receptor, from which the sequence in the compound is determined, is the 7TM receptor associated with said signal transduction.

29. (Withdrawn) A method according to Claim 28, for the treatment of a disease selected from the group consisting of: hypertension, stroke, heart failure, neurodegenerative diseases (including Alzheimer's disease), renal disease, psychiatric disease, cancer, asthma, diabetes and immune disorders.

30. (Withdrawn) A method of detecting a ligand that binds to the unique region of a 7TM receptor, comprising:

(f) providing a compound according to Claim 7;

(g) incubating said compound with a sample, to be tested for the presence of said ligand, for a time sufficient for said ligand to bind to said compound; and

(h) detecting any binding pair of said ligand and said compound that has been formed in step (g), wherein the presence of said e binding pair establishes the existence of said ligand in said sample.

31. (Withdrawn) The method of Claim 30, further comprising the following steps after step (h):

(i) separating said ligand from said compound in said binding pair; and

(a) (j) determining the structure of said ligand, thereby identifying said ligand.

32. (Previously presented) A pharmaceutical composition comprising as an active ingredient at least one of the compounds of Claim 7.

33. (Currently amended) A pharmaceutical composition according to claim 32 comprising as an active ingredient a peptide sequence selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, and SEQ ID NO:13~~compound depicted in Fig. 1~~.

34. (Currently amended) A compound according to claim 7, ~~comprising any of the sequences depicted in Fig. 1~~ wherein the peptide sequence is selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, and SEQ ID NO:13.

35. (New) The compound according to claim 7, wherein the peptide sequence consists of 5-9 amino acid residues.

36. (New) The compound according to claim 35, comprising a peptide sequence is selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, and SEQ ID NO:13.

37. (New) The compound according to claim 7, wherein the 7TM receptor is endothelial differentiation gene (EDG).

38. (New) The compound according to claim 37, wherein the peptide sequence of 5-20 amino acid residues is selected from the group consisting of:

(a) a continuous stretch of at least 5 amino acids present in native EDG in positions 135-154;

(b) a variant of the peptide sequence according to (a) wherein up to 40% of the amino acids of the native sequence have been replaced with a naturally or non-naturally occurring amino acid or with a peptidomimetic moiety; and/or up to 40% of the amino acids have their side chains chemically modified; and/or up to 20% of the amino acids have been deleted provided that at least 50% of the amino acids in the parent sequence of (a) are maintained unaltered and the variant

(c) a peptide sequence according to (a) or (b) wherein at least one of the amino acids is replaced with a corresponding D-amino acid;

(d) a peptide sequence according to any one of (a) – (c) wherein at least one of the peptidic backbones has been altered to a non-naturally occurring peptidic backbone;

(e) a peptide sequence being the sequence of any one of (a) – (d) in reverse order; and

(f) a combination of two or more of the peptide sequences of (a) to (e).

39. (New) The compound according to claim 38, wherein the peptide sequence consists of 5-9 amino acid residues.

40. (New) The compound according to claim 39, wherein the peptide sequence of 5-9 amino acid residues is selected from SEQ ID NO:4 and SEQ ID NO:5.

41. (New) The compound according to claim 7, wherein the 7TM receptor is β2-adrenoreceptor.

42. (New) The compound according to claim 41, wherein the peptide sequence of 5-20 amino acid residues is selected from the group consisting of SEQ ID NO:7, SEQ ID NO:8 and SEQ ID NO:9.

43. (New) The compound according to claim 7, wherein the 7TM receptor is MC1.

44. (New) The compound according to claim 43, wherein the peptide sequence consists of 5-9 amino acid residues.

45. (New) The compound according to claim 44, wherein the peptide sequence is selected from the group consisting of SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12 and SEQ ID NO:13.